ETC® Quick Guide

Cobalt™ Nomad, Cobalt Client, & Cobalt Offline

Cobalt™ software, when installed on a personal computer (with the Windows® 7 or Windows 8 operating system) running Cobalt software version 7.0.0 or greater, can be used to control a lighting system, interact with an existing Cobalt lighting control system, or as an offline show file editor.

A computer with the Cobalt software and Nomad dongle installed may be used online as a server, backup, or client to another Congo family product. Backup capabilities extend only to the number of outputs available on the Cobalt Nomad installation (maximum 4 universes).

A computer with the Cobalt software and a Cobalt client dongle installed may be used on a Cobalt lighting network to interact with another Cobalt product acting as server. This could be a Cobalt 20 console, Cobalt Light Server, or another computer running Cobalt Nomad.

A computer with the Cobalt software and no connected dongle may be used offline to edit or create show files. Cobalt Offline Editor can communicate with visualization software, but the output will be steppy.

The Cobalt Nomad kit contains the following:

- Cobalt Nomad dongle
- Tag with Nomad serial number and dongle number. Please keep this tag in a safe place.
- USB drive containing software, this quick guide, user manuals, tutorials, etc.

The Cobalt Client kit contains the following:

- Cobalt Client dongle
- USB drive containing software, this quick guide, user manuals, tutorials, etc.

Note: *It is highly recommended that you check www.etcconnect.com/Cobalt for the latest version of software as it is possible that patches or updates have been released since this kit was manufactured.*

Minimum Hardware Requirements

Personal Computer (laptop or desktop) with:

- Intel-based multi-core processor with clock frequency higher than 2.0 GHz
- Windows 7 or Windows 8 with 500 MB free disk space
- Display with resolution of at least 1280x1024
- 512 MB of RAM minimum (1 GB recommended)
- 64 MB Video Card with hardware accelerated OpenGL
- RJ-45 Ethernet Network adapter (required to communicate with a lighting network, DMX output devices)
- Available USB port for the Cobalt Nomad or Cobalt Client Dongle

Note: *Windows XP and Macintosh computers are not officially supported in this release. It may be possible to use a Mac with Parallels® or Windows XP; however, performance and connectivity to lighting networks cannot be guaranteed.*

Note: *Using typical WiFi networks to transmit show critical data is not recommended. Show critical data includes output levels to the rig and backup connections to other consoles, Cobalt Nomad, or Client computers.*

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Using Real-Time Software Like Cobalt Nomad on a Personal Computer

Cobalt is an application that, when acting as a server, performs real-time fading of lighting levels to create a show. It is vital to the accurate performance of your show that the computer used for this purpose not be used for other activities, like gaming or web surfing. It is highly recommended that the performance of the computer as a lighting controller be checked after any major changes to the computer running Cobalt software – like system updates, new service packs, newly installed software, updated drivers and so on – to ensure that the change does not affect the performance of the real-time performance of Cobalt.

Note: *If you experience any performance issues, it is recommended that you first close any other programs that are running, including background tasks.*

Software Installation

Note: *A software installer is provided on the included USB drive, however it is a good idea to verify that you have the latest version of the software. Please check www.etcconnect.com/Cobalt to ensure that you have the latest version.*

Step 1: Copy the files (software, dongle driver, and movie files) from the USB drive to your PC.

Step 2: To install Cobalt software:

Note: *If you are reinstalling Cobalt, click the Repair option at the beginning of the installation process.*

Step a: Double-click the Cobalt installer file.

Note: *If you downloaded the latest software version from www.etcconnect.com, you may need to extract the files from the ZIP file before running the Cobalt installer.*

Step b: Follow the directions within the installer.

Step 3: To install the optional training and tutorial movies, double-click the installer file, and follow the instructions to install the movies on your PC.

Getting Started

For Cobalt Nomad and Cobalt Client systems, connect the Nomad or Client dongle to a USB port on your computer. The dongle must be connected to and recognized by the computer **before** you launch the Cobalt application.

For Cobalt Offline Editor systems, there is no dongle required and you can just start the Cobalt application normally.

Note: *The Cobalt Nomad and Cobalt Client dongles require software drivers. Please make sure that you have installed these drivers prior to connecting the dongle.* *See "Software Installation" on page 2.*

When you first launch the Cobalt application, a welcome screen appears with a number of options, depending on whether you have the Cobalt Nomad dongle connected to the computer and whether you have other Cobalt family devices on the same network and in the same Logical Network, see *Configuring Your Output Options on page 6*. On a simple system with only the PC and the Nomad dongle connected, you should see this:

Cobalt
Net:0
IP: Multiple!
Streaming ACN
COBALT
With Cobalt Nomad and another server online, this option will display "Start Backup"
Start Server
With Cobalt Nomad or Cobalt Client and another server online, this option will display "Start Client"
System settings
Start Offline
Welcome to Cobalt!
Use left/right arrow keys and MODIFY/Enter to select an option
Multiple IP addresses detected! Please select one in System settings.
Quit
With no dongle connected, this will be the only "start" option shown
V7.0.0 beta 56

Navigating this screen

You can simply click on the round buttons to activate the appropriate option, or you can use the arrow keys to move the gold selection indicator around the disc. Press ENTER to activate your selection.

Note: *A quick note about the use of the term MODIFY in the software - the Cobalt family consoles use the **[Modify]** key on their facepanels to confirm actions, enter numbers and texts into dialogs, and modify spreadsheet cells. On a PC keyboard, the ENTER/RETURN key is the **[Modify]** key.*

Start Server/Start Backup

Click **{Start Server}** option to start the Cobalt application and allow uninterrupted data onto the network for proper control of your lighting devices. If this option is not visible, the Cobalt Nomad dongle has not been recognized by your computer or the Cobalt application. Quit Cobalt and check that the dongle is recognized by your PC.

If this option shows **{Start Backup}**, there is another Cobalt family product with the same Logical Network setting already connected to the network as a server. There should only ever be one server online in a Logical Network at a time. If you want the Cobalt Nomad to be an independent server on this network, please adjust the Logical Network setting to a different number. *See "Protocols" on page 7.*

Start Client

This option appears to the left of the Start Server/Start Backup option when there is another Cobalt family product online, in the same Logical Network, and already started as a server. Otherwise the option will appear blank.

Start Offline

This option will start the Cobalt application without sending any lighting levels to the network. If you have no Cobalt Nomad or Cobalt Client dongle connected, it is possible to use Cobalt offline with a visualizer by clicking the "Enable Output in Offline Mode" box in the Protocols tab of System Settings, see *Configuring Your Output Options on page 6*. If you are using Cobalt Nomad and your faders appear very choppy when running your show, ensure that your system is running as a server and not in offline mode. Offline systems will have a green background color in the Cobalt windows, and will display "Offline Editor" in the upper left corner of those windows.

System Settings

Click this option to enter the System Settings of Cobalt. See *Connecting to the Network on page 5* for important settings regarding your network configuration. System Settings contains the language settings for Cobalt. You may change the user interface and help system languages separately. Other settings are described in the online help or the Cobalt User Manual found on the included USB drive or at *www.etcconnect.com/Cobalt*.

Quit

Click this option to quit the Cobalt application. You can also click on the X in the upper right corner of the welcome screen.

Connecting to the Network

To connect to a lighting network, you may need to adjust the configuration of your Network Interface Connection. This may include changing an IP address or adjusting a proxy server setting. The details on what settings you may need to adjust can be clarified with the administrator of the network you are using. These settings are made in Windows itself.

CAUTION: *ETC does not recommend the use of wireless networks for transmission of show-critical data like lighting levels or backup connections.*

The image below shows the settings available on a typical laptop:

Using Cobalt Nomad with an ETC Net3 DMX/RDM Gateway or Other ETC Lighting Networks

Note: *Always consult with the administrator of the network you plan to connect to regarding specific settings. Some settings may interfere with the normal operation of an existing network.*

If you plan to use Cobalt Nomad with a brand new ETC Net3 DMX/RDM Gateway for conversion of sACN to DMX, or if you plan to connect your Cobalt Nomad computer to another ETC lighting network using ETC recommended IP addressing, we recommend that you configure the Internet Protocol (TCP/IPv4) settings for your computer as shown below.

Note: *The network address of your DMX gateways must be configured to complementary settings. Use Net3 Concert, GCE or the Net3 Address Service.*

- IP Address: 10.101.79.101
- Subnet Mask: 255.255.0.0
- Default Gateway: 10.101.1.1

Network Services

Other network services are available in this dialog and are disabled by default. It is not recommended that you adjust these settings without suitable knowledge of what you are doing, as you could disturb an existing network's configuration. Consult the administrator of the network you are using before enabling any additional Network Services.

Note: *Network Services cannot be enabled unless Gateway Configuration Editor (GCE) or Net3 Concert is installed on your computer. GCE is available at* http://www.etcconnect.com/product.downloads.aspx?ID=20370*, and Net3 Concert is available at http://www.etcconnect.com/product.downloads.aspx?ID=22130.*

Network Configuration Applications (Utilities Tab)

These buttons will become available if you have also installed NCE or GCE software on the Cobalt Nomad computer in the default locations offered at installation. If you choose to install into a different folder, you cannot use these buttons as a shortcut to these programs.

Using Fader Wings

Any of the available fader wings or module may be connected to your Cobalt Nomad, Cobalt Client, or Cobalt Offline Editor computer. This includes:

- Universal Fader Wing 2x10
- Universal Fader Wing 2x20
- Universal Fader Module 1x20 (this module is designed to be mounted to a console directly and does not come with any other stand - please consider how you might mount this module if you plan to use it with Cobalt Nomad.)
- Congo jr Master Playback Wing

Note: *Wings must be connected to and recognized by the PC before the Cobalt application is started. The driver for these wings is installed automatically with the Cobalt software.*

When you first connect a new USB device to your Windows 7 PC, the "Found New Hardware" wizard will appear and prompt you to install the drivers. After completing the wizard procedure, the new USB device should be operational with your PC. Windows 8 PCs will install the drivers automatically if found. If not found, follow the prompts given to install the drivers.

Note: *Connecting to a different USB port on your computer may cause the computer to repeat the "Found New Hardware" procedure.*

Configuring Your Output Options

Cobalt Nomad offers the following Ethernet lighting protocols:

- Streaming ACN (sACN)
- ArtNet

Which protocol you use depends on the lighting devices you wish to control and the intermediate converter you may need to get data to those lighting devices. For example, if you want to control an ETC Sensor3 dimmer rack, you can connect the rack and the computer to an Ethernet network and communicate directly to the rack using the sACN protocol. No intermediate converter is required if all your lighting devices can communicate over Ethernet directly.

If you are connecting to a DMX based system, an intermediate converter is required to translate an Ethernet lighting protocol to DMX.

The Ethernet lighting protocol settings are found in the System Settings application, on the network tab, accessible from the main Cobalt welcome screen.

Protocols

Protocols are assigned to the Ethernet port. Scroll down on the Network tab to find the Output Protocols and their settings:

- **ACN** – enable this if you are using ETC Net3 DMX/RDM Gateways and you want to use the RDM protocol, or if you are using ETC Net3 I/O or Show Control Gateways with your system.
- **sACN** – enable this if you want to use the sACN protocol to send levels to devices or if you are using an ETC Net3 DMX/RDM Gateway or other sACN converter to send levels.
- **ArtNet** – enable this if you are using ArtNet or an ArtNet converter to send levels to devices. Please note the Address options and adjust this setting if necessary based on the ArtNet devices you are controlling. See the user documentation of those devices for more information.
- **Logical Network** – allows Cobalt family products to communicate with each other in backup/client configurations. For two or more Cobalt family products to communicate with each other, the Logical Network number must be the same. If you would like various Cobalt family products to operate independently on the network, ensure that each grouping of products (a server and its backup, or a server and its clients) has its own Logical Network number.

Once you have selected your network connection, determined your Ethernet lighting protocol(s) and logical network settings, these are displayed in the upper right corner of the welcome screen when you start the Cobalt application.

Using Ethernet Lighting Protocol Converters

If you have lighting devices that require DMX protocol, you will need to use an intermediate converter to take an Ethernet-based lighting protocol that Cobalt Nomad outputs and turn it into DMX protocol for your devices. There are a number of options available to you:

ETC Net3 DMX/RDM Gateways – sACN Protocol

Available in two-port and four-port sizes, this is the most configurable option for use with Cobalt Nomad. These Gateways also support the RDM protocol for remote addressing, monitoring and setup of RDM-capable devices. You can find out more about these converters at our web site www.etcconnect.com/networking. If you choose to use these Gateways, the Gateway Configuration Editor software available at http://www.etcconnect.com/product.downloads.aspx?ID=20370 can be used to configure them for use on your network.

Note: *To use Net3 Gateways it may be necessary to enable Network Services and the Address Service (DHCP). Please check with the administrator of the network you are connecting to before enabling the DHCP service.*

ArtNet and Other sACN Protocol Converters

A number of companies offer converters that take in the ArtNet or sACN protocol and send DMX. If you choose to use a converter made by others, please consult the user documentation of the converter for instructions on setup and use.

What about USB-DMX Converters?

Cobalt Nomad supports a single ETC Gadget USB-DMX converter for one universe of output. The universe may be set up in Cobalt Settings on the Output tab. The start address of DMX 1 will be used by the Gadget.

Using MIDI Panels by Others

Cobalt software allows the connection of MIDI button and fader panels. To use these panels, consult the user documentation for the panel to determine how the panel must be programmed for use with Cobalt.

MIDI - Direct Playback Mode Supported Commands:

Notes	MIDI Channel	Start at Number	End at number	Count	Controllers	MIDI Channel	Start at Number	End at number	Count
Master 1-20	1	0	19	20	Master 1-20	1	0	19	20
Flash 1-20	1	20	39	20	Master 21-40	2	0	19	20
Page+/Page- block 1	1	40	41	2	Master 41-60	3	0	19	20
					Master 61-80	4	0	19	20
Master 21-40	2	0	19	20					
Flash 21-40	2	20	39	20	Crossfade A, B	1	100	101	2
Page+/Page- block 2	2	40	41	2	Speed Control A, B	1	102	103	2
					GrandMaster	1	104		1
Master 41-60	3	3	0	19	Independent 1-6	1	110	115	6
Flash 41-60	3	3	20	39					
Page+/Page- block 3	3	3	40	41	**Program Change**				
					Page, block 1	1	0-127		128
Master 61-80	4	4	0	19	Page, block 2	2	0-127		128
Flash 61-80	4	4	20	39	Page, block 3	3	0-127		128
Page+/Page- block 4	4	4	40	41	Page, block 4	4	0-127		128
Direct Select 1-40	1	1	50	89	Jump in main playback	5	0-127		128
Direct Select Page 1-5	1	1	90	94					
Independent 7-9	1	1	100	102					
GO, Pause, GoBack	1	1	103	105					
Refresh?	1	1	106	106					

To use MIDI Panels with Cobalt Nomad, you must enable Direct Mode in the MIDI settings:

Step 1: Start Cobalt.

Step 2: Open an existing or create a new play file. If you create a new file, click **{Let's Begin}** to close the startup dialog.

Step 3: Press F11 to open the play settings.

Step 4: Click the MIDI tab.

Step 5: Click the box next to Direct Mode to enable the setting.

Interacting with Cobalt Software on a PC

Cobalt offers the following tools to make it easier to use the software on a PC:

- *Keyboard Shortcuts*
- *The Console Mimic Dock*
- *Right-click "Context" Menus*
- *Cobalt Help System/User Manual*

Keyboard Shortcuts

It is recommended that you use a keyboard with a numeric keypad in addition to the alphanumeric section to simplify the entry of numbers. In addition, an X-Keys panel may be used to simplify data entry in Cobalt Nomad. The X-Keys XK-60 panel is recommended and a pre-made macro file has already been created for Congo v6.4.x software, that is also compatible with Cobalt. This file is included on the

USB drive included in the Cobalt Nomad kit.

Console Key	PC Equivalent	Mac Equivalent	Console Key	PC Equivalent	Mac Equivalent
-	Ctrl Left Arrow or Keypad Ctrl *	Keypad ⌘*	DELETE	Delete	Delete (not backspace)
+	Ctrl Right Arrow or Keypad *	Keypad *	DEVICE	D	D
-%	Ctrl Down Arrow		DISPLAY LIST	J	J
+%	Ctrl Up Arrow		EFFECT	E	E
A	A	A	ESC	ESC	ESC
ALIGN	Ctrl A	⌘A	Exit Cobalt	Alt X	Option X
ALL	Ctrl F6	⌘F6	FAN	Ctrl F	⌘F
AT LEVEL	Ctrl L or Keypad +	⌘L or Keypad +	FOCUS (F)	Alt F	Option F
ATTRIBUTE	I	I	FETCH	F or Keypad Ctrl +	F or Keypad ⌘+
B	B	B	FORMAT	F4	F4
BEAM (B)	Alt B	Option B	GO	Ctrl G	⌘G
BLIND	F3	F3	GO BACK	Ctrl B	⌘B
BROWSER	F10	F10	GOTO	G	G
C/ALT	Backspace	Backspace	GROUP	Alt G	F7
CAPTURE	C	C	HELP (?)	F1	PDF User Manual
CH	Ctrl H or Keypad -	⌘H or Keypad -	HIGHLIGHT	Alt H	Option H
COLOR (C)	Alt C	Option C	HOME ATTR	F5	F5
COLUMN	F9	F9	IN	Ctrl I	⌘I
COPY	Ctrl C	⌘C	IND 7	Ctrl F7	⌘F7
DELAY	Ctrl D	⌘D	IND 8	Ctrl F8	⌘F8
			IND 9	Ctrl F9	⌘F9

Console Key	PC Equivalent	Mac Equivalent	Console Key	PC Equivalent	Mac Equivalent
INSERT	INSERT	⌘DELETE (not back-space)	**PLAYBACK**	X	X
LAST	L	L	**PRESET**	P	P
LOAD	F6	F6	**RECORD**	R	R
LIVE	F2	F2	**REFRESH**	V	V
MACRO	Q	Q	**RELEASE**	Ctrl R	⌘R
MASK	K	K	**SAVE**	Backspace & U	Delete & U
MASTER	F8	F8	**SAVE AS**	Backspace & R	Delete & R
Master Keys 1- 10	1-0 along top of keyboard	1-0 along top of keyboard	**SELECT**	Shift	Shift
MODIFY	Enter	Return	**SELECT ALL**	Ctrl N	⌘N
MUTE	Y	Y	**SEQ**	S	S
NEXT	N	N	**SEQ -**	X & Down Arrow	X & Up Arrow
NOTE	Alt N	Option N	**SEQ +**	X & Up Arrow	X & Down Arrow
Number Input	Ctrl 1-0 or Numeric Keypad	⌘1-0 or Keypad	**SETUP**	F11	F11
OUT	Ctrl O	⌘O	**SOLO**	Alt Y	Option Y
OUTPUT	O	O	**TAB**	Tab	Tab
PAGE (M1-20)	M	M	**TEXT**	Alt T	Option T
PAGE (M21-40)	Ctrl M	⌘M	**THRU**	Ctrl T or Key-pad /	⌘T or Keypad /
PALETTE	Alt P	Option P	**TIME**	T	T
PARK	Z	Z	**TRACK**	F12	F12
PASTE	Ctrl V	⌘V	**UPDATE**	U	U
Console Key	**PC**	**Mac**	**WIZARD**	W	W

Note: *The Mac shortcuts will only work for offline editing and not with Cobalt Nomad or Cobalt Client.*

The Console Mimic Dock

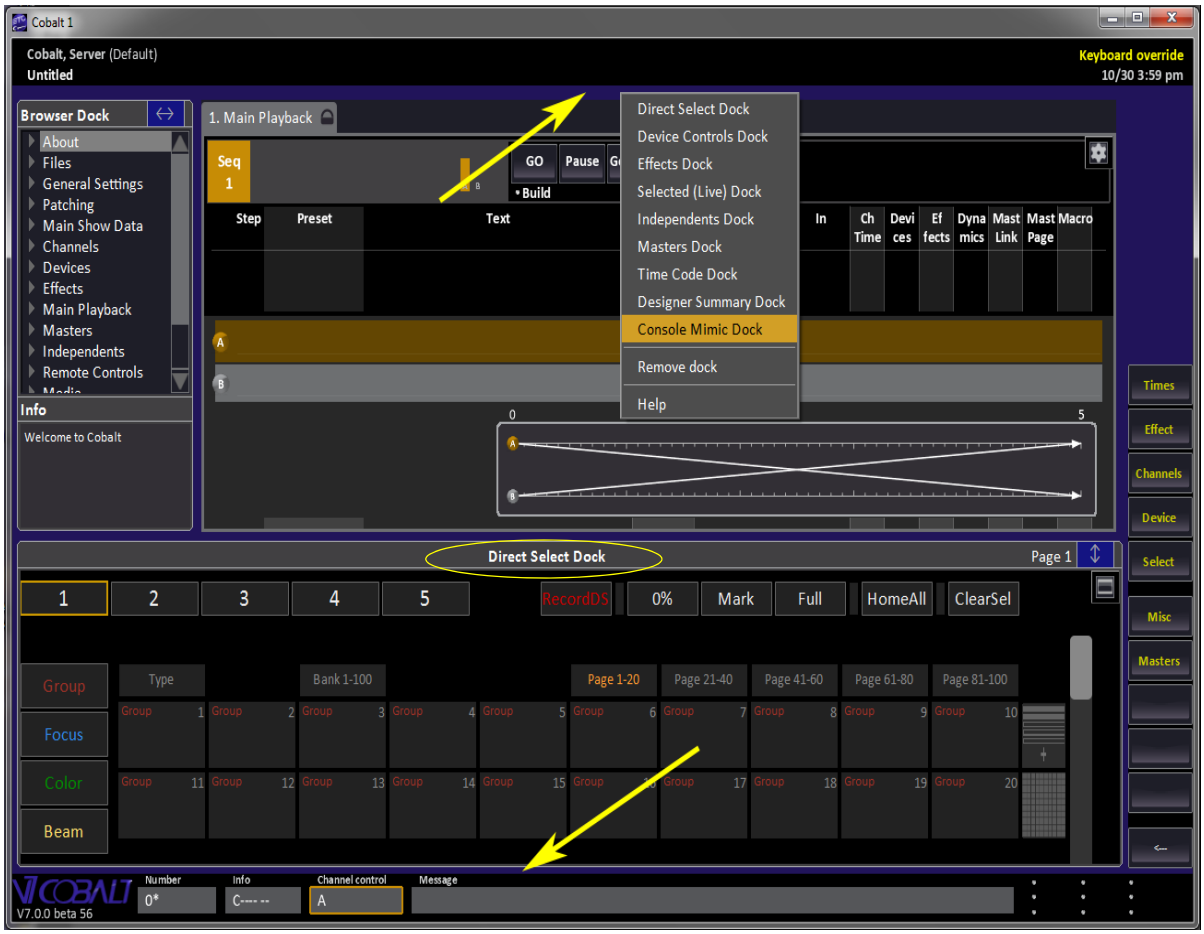
The Console Mimic Dock area is an on-screen emulation of the Cobalt console facepanel. It contains most keys and faders found on a Cobalt console and can be used to interact with the Cobalt Nomad as well. Cobalt uses a lot of two-key shortcuts for programming and you can use these as well by using CTRL-click to hold down a key in the console mimic. For example, CTRL-click RECORD and then click a Master Key to record a preset directly to a Master Playback.

Open the Console Mimic Dock:

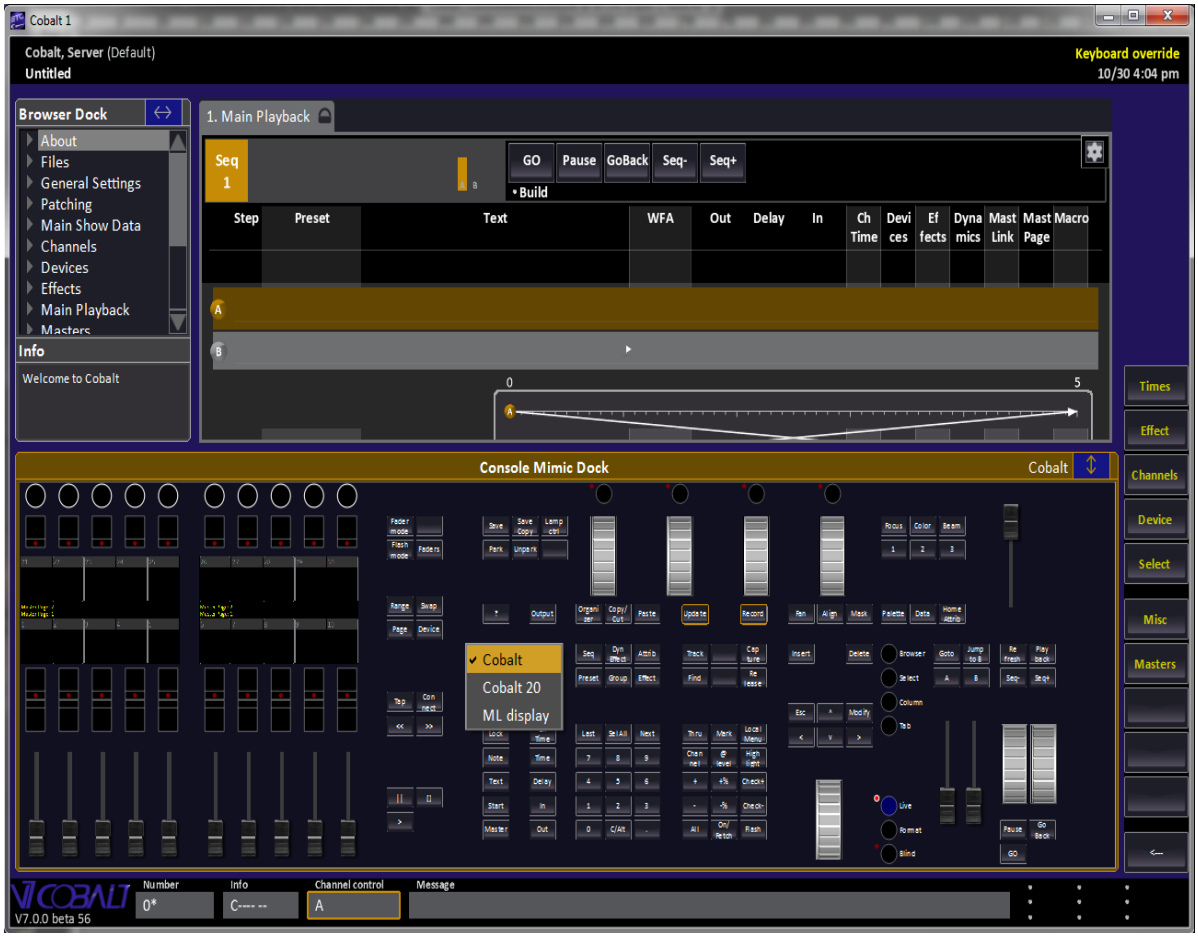
Step 1: Start Cobalt.

Step 2: Open an existing or create a new play file. If you create a new file, click **{Let's Begin}** to close the startup dialog.

Step 3: Right-click on an existing dock or along the top or bottom edge of the screen area indicated below, then click **{Console Mimic Dock}**.

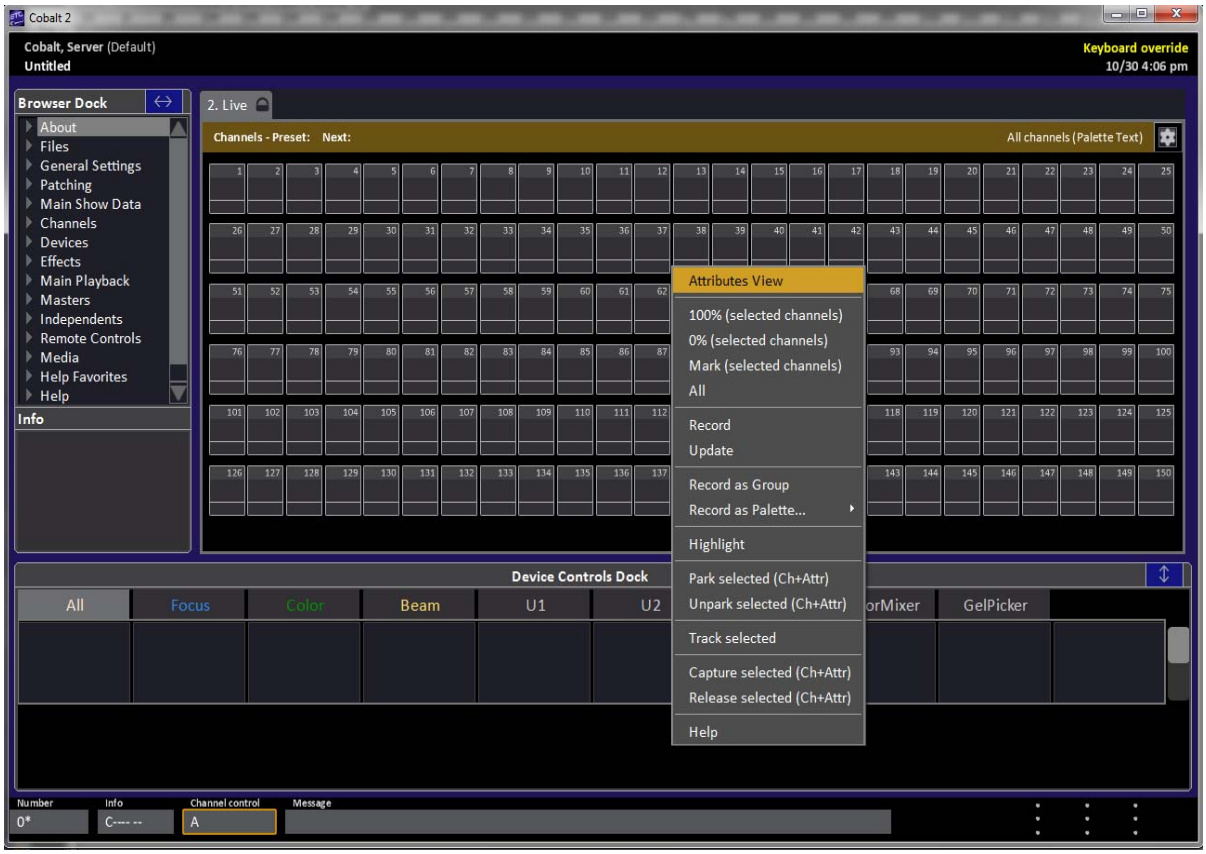


Step 4: When the Console Mimic Dock is displayed, you can choose which portion of the console you want to work with by right-clicking in the blue background area of the dock. You can also use the zoom command (F4 + mouse scroll wheel) to adjust the size of the console content in the dock.



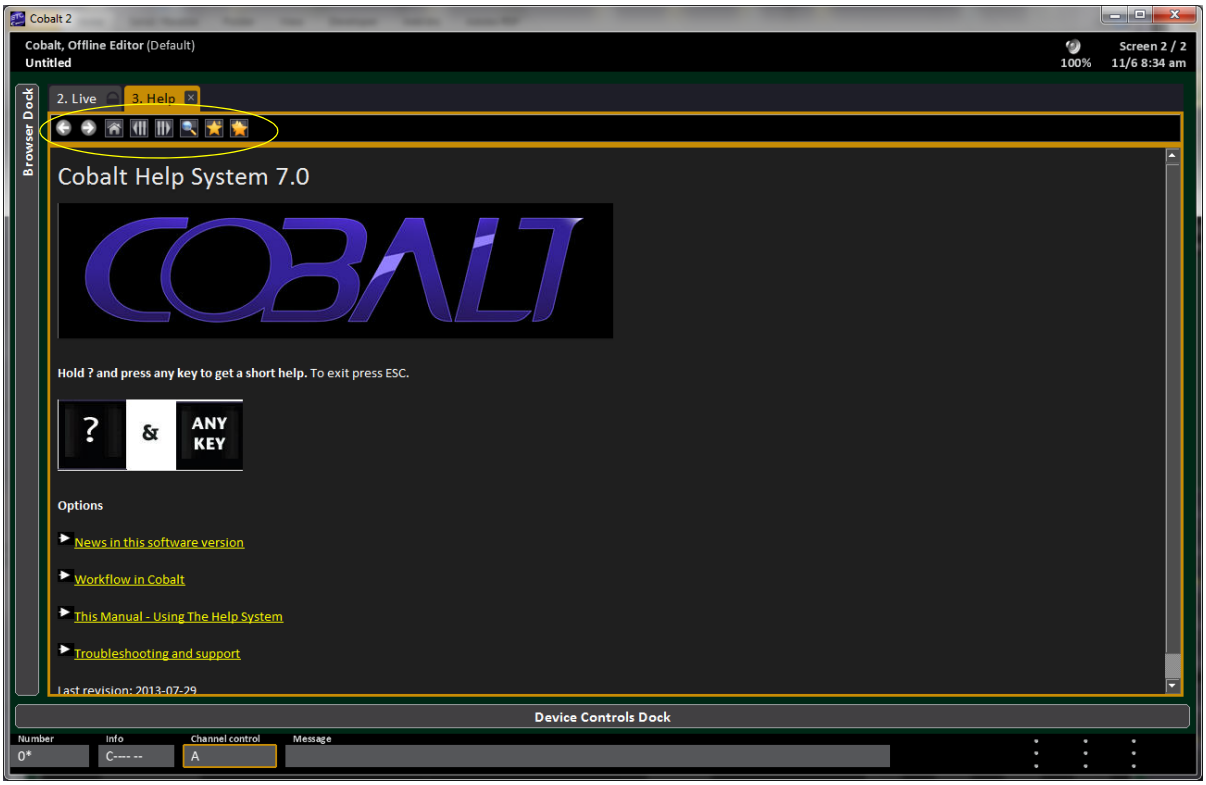
Right-click "Context" Menus

Right-click menus are found all over the software, providing direct access to functions that may be otherwise accessed by a console two-key command. These menus are described in the help system and Cobalt User Manual, but you might just try right clicking on the screens to see what commands are available in the various views.



Cobalt Help System/User Manual

Press F1 to open the Cobalt Help system. This help system contains the entire contents of the user manual. This includes instructions on creating new play files, saving your data and exiting Cobalt, opening and playing back plays, as well as how to use all of the Cobalt system's various functions.



To navigate the help system:

- Use the up and down arrows on your keyboard to page through the help system.
- Pressing F1 + ANY KEY will give you a shortcut to search in the help system.
- Yellow underlined text indicates a hyperlink to another page of the help system - click these links to jump to that part directly.
- When focused on a help tab, click the magnifying glass icon at the top of the help tab to open a text search dialog. Type your search term into the dialog then click the **{Modify}** box or press the ENTER/RETURN key on your keyboard to start the search. Your search results will appear as a list of hyperlinks to pages that contain that text or a related concept.
- When focused on a help tab, press click the “star +” icon at the top of the help tab to create a “Favorite” inside the help system. You can add your own note to this bookmark, and then later you can come back to this page directly from the Browser using the Help Favorites node, or from within the help tab by clicking on the “many stars” icon.

The help system will describe a lot of navigation using keys on the console facepanel - many of these actions can be performed simply using a mouse as well.